ASA classification is a highly significant predictor of ipsilateral stroke free survival in asymptomatic octogenarians with elective internal carotid endarterectomy

Introduction

Internal carotid endarterectomy in asymptomatic patients is being discussed controversially, in particular in octogenarians. The goal of this investigation was to determine, whether recently operated patients met the 2017 guidelines of the ESVS in hindsight.

Patients and methods

Asymptomatic patients with internal carotid endarterectomy between January 2011 and June 2013 were followed to determine their five year survival and stroke rate. Data was compared to all strong recommendations (Type I or III) from the ESVS guidelines.

‘Perioperative’ was defined as a 30 day interval following surgery. Stroke-free survival was determined with SPSS using the Kaplan Meier method. The influence of several factors on stroke-free-survival was calculated with cox-regression.

Results

Between 1.1.2011 and 30.6.2013 73 asymptomatic octogenarians underwent internal carotid endarterectomy at our University Hospital. There were 37 (50.7 %) males and 36 (49.3 %) females, mean age was 82.6 years (range 80.0 - 88.7 years), 71.2 % (52) were under sufficient blood pressure lowering therapy, 15.1 % (11) had insufficient treatment, 4.1 % (3) had untreated hypertensi

on and 9.6 % (7) showed normal blood pressure, diabetes was present in 23.3 % (17), previous cardiac infarction in 24.7 % (18), previous CABG in 8.2 % (6), non recent ipsilateral stroke in 8.2 % (6) and non recent contralateral stroke in 17.8 % (13).

There was one perioperative death (uneventful operation and hospital stay, five days after discharge the patient was admitted to another hospital for heart failure and died).

Mean stroke free survival was 5.3 years (CI 4.7 - 5.8 years). During follow-up one patient experienced a minor ipsilateral stroke (Rankin 2).

There were two factors with a significant impact on stroke free survival: ASA-classification (p = 0.004, ASA 1-3: 6.0 years, ASA 4: 4.7 years) and age (p = 0.01, 80-82: 5.5 years, 83-89: 4.9 years).

The current ESVS guidelines consist of 118 recommendations, 37 of those are applicable to the study population. The examined procedures, habits and results revealed, that 28 of 37 recommendations were met.

Conclusions

Carotid endarterectomy in asymptomatic octogenarians is possible with a low perioperative stroke- and deathrate. Though our results are good, following the recommendations more closely might further improve results. Collecting more data and determining specific risk factors in this particular subgroup of patients will enable us to improve the selection process for internal carotid endarterectomy in asymptomatic octogenarians.